

Teacher Notes
Grades K–2 Activity 6
Heavyweight Champion

NJ Core Curriculum Standards:

- Use a variety of measuring instruments, emphasizing appropriate units. (Science 5.5.1.)
- Use mathematical skills and concepts in ordering, counting, identifying, measuring, and describing. (Science 5.5.3.)

ESPA Content/Skill Outlines:

- Different kinds of materials have different properties, For example, 1) Weight, 2) Color, 3) Texture, 4) Hardness, 5) Luster, 6) Reflectiveness (mirrors) to light, sound, and heat, 7) Transparency to light, 8) Sound when struck, plucked, or vibrated. (5.8.1.2.3 —Knowledge)
- Use tools to make accurate measurements. (5.4.1.2.3.— Skills)

Teacher Background: Mass, the amount of matter in an object, is measured with a balance in gram units. Weight, a measure of the gravitational force exerted on an object, is measured with a spring scale in newtons (a unit of force).

Materials: Any four rock samples from New Jersey Rocks and Sediments Kit, balance

Advance Preparation: If you do not have a balance in your classroom, borrow one from another teacher. Set up the balance and rocks at a learning center where children can work individually or in small groups. If there are nonreaders in the class, you will want to read the directions on the Student Activity Sheet to them before sending them to the center.

Directions:

- Introduce the activity by explaining that some sports have contests in which a person can become champion of the world. Ask children to imagine that the rocks are in a contest to be recognized as the heaviest (having the most mass).
- Make sure children know how to compare the masses of two objects by placing each on one side of a balance.
- When children have completed the activity, bring the class together to find the mass of each sample in grams or nonstandard units (such as paper clips). Have children identify the heaviest (most massive) rock by comparing the masses of the samples.

Discussion/Journal Entry Question: How did your prediction compare to your measurement with a tool? (*Concluding*)

Suggested Evaluation: The heaviest rock will vary from kit to kit due to differences in the samples. Have children explain how they used the balance to compare the rocks.

Name _____

Date _____

Student Activity Sheet for Activity 6

HEAVYWEIGHT CHAMPION

1. Which of the four rocks do you think is heaviest?

2. Put one rock on each side of a balance.
Leave the heaviest rock on the balance.
Take off the other rock and put it away.

3. Put another rock on the balance.
Leave the heaviest rock on the balance.
Take off the other rock and put it away.

4. Do step 2 again.

5. Write the number and name of the heaviest rock.
